

# COUNTY OF ULSTER

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## DEPARTMENT OF THE ENVIRONMENT

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## MEMORANDUM

To: Alan Lomita, Chairman  
Way and Means Committee, Ulster County Legislature

CC: Brian Shapiro, Chairman  
Environmental Committee, Ulster County Legislature

From: Amanda LaValle and Marty Reisinger  
Ulster County Department of the Environment

Re: Guidance for fuel-efficient vehicle purchase

Date: 8/07/08

The Department of the Environment completed some brief research into your question about enhanced fuel-efficiency standards for vehicle purchase by the County. We unfortunately didn't find any definitive methodology referencing Federal CAFÉ (Corporate Average Fleet Efficiency) standards. However, we did find some useful information which we feel may be of help in the procurement process. In this memo, you will find our suggestions along with some background information. In addition, attached to this memo is a graph which represents the purchase prices and estimated five year fuel costs for vehicles available on state contract. We think that this visualizes the benefit of purchasing fuel efficient vehicles by considering the combined costs of fuel use along with initial purchase cost.

We hope that this information will be useful to you and the committee. Please call on us (338-7455; 340-3522) with any questions or concerns.

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### **Background Information on Fuel Efficiency Requirements-**

In 1975 the Federal government first established the Corporate Average Fuel Economy (CAFÉ) standards. Those standards doubled passenger car fuel economy average to an average of 27.5 mpg. The standards were reduced for Model Years '86 -'89 and increased back to 27.5 mpg for Model Year 1990 and have remained at this level since that time. The standard for light trucks was set at 22.2 mpg for model year 2007. New CAFÉ standards are set to increase fuel economy for both cars and light trucks to 35 mpg by 2020. We

did not find any reference to municipal or state government enacting their own fleet average standards as a way to increase fleet efficiency.

In New York State, Executive Order #111 was signed in June of 2001 and it sets standards for alternative fuel vehicle procurement for state government. NYS Executive Order #111 requires all state agencies, public benefit corporations and public authorities to assure that at least 50% of all new light-duty vehicles acquired shall be “alternative-fuel” vehicles by 2005. Alternative-fuel vehicle acquisitions are to increase by 10% annually through 2010, arriving at 100% of all vehicles purchased. Alternative-fuel vehicles, as defined, include Bi-fuel (CNG/ gasoline; propane/gasoline), Flex-fuel (ethanol/gasoline), hybrid (electric/gasoline), and licensed “Neighborhood Electric” vehicles. While not specifically required under E.O. #111, all other entities in NY State, e.g., county governments, are “encouraged” to also adopt these requirements.

### **EPA Green Vehicles Guide**

Securing specific vehicle purchases based on enhanced fuel efficiency and lowest emissions can be supported by referencing the US EPA Green Vehicle Guide. The actual website (<http://www.epa.gov/greenvehicles/index.do>) is a useful tool that allows you to search the make, model and model year of all available vehicles and compare specific choices for fuel efficiency and lowest emissions profile - both important environmental criteria.

For your use, we included a spreadsheet that provides the green vehicle rating criteria for cars that are available on state contract. We referenced this spreadsheet to the current state bid lists for “Passenger Cars” and “Alternative Fuel Vehicles” issued by NYS, Office of General Services. You can review this spreadsheet to easily identify the best performing vehicles currently on state contract.

### **UC Department of the Environment Recommendations-**

In summation of our research, we would like to offer these general guidelines for procurement of vehicles.

#### 1- Explicitly consider fuel costs as part of the purchase costs

We realize it may not be economically feasible to purchase only hybrid vehicles or the most fuel efficient vehicles within a particular vehicle class. However, we suggest that in addition to the purchase cost of the vehicle the County consider the fuel costs of operating the vehicle over a five year period of time. We contend that the purchase cost *plus* the fuel cost for the vehicle more accurately reflects the costs to the County associated with a vehicle purchase. The bar chart attached to this memo illustrates this cumulative cost.

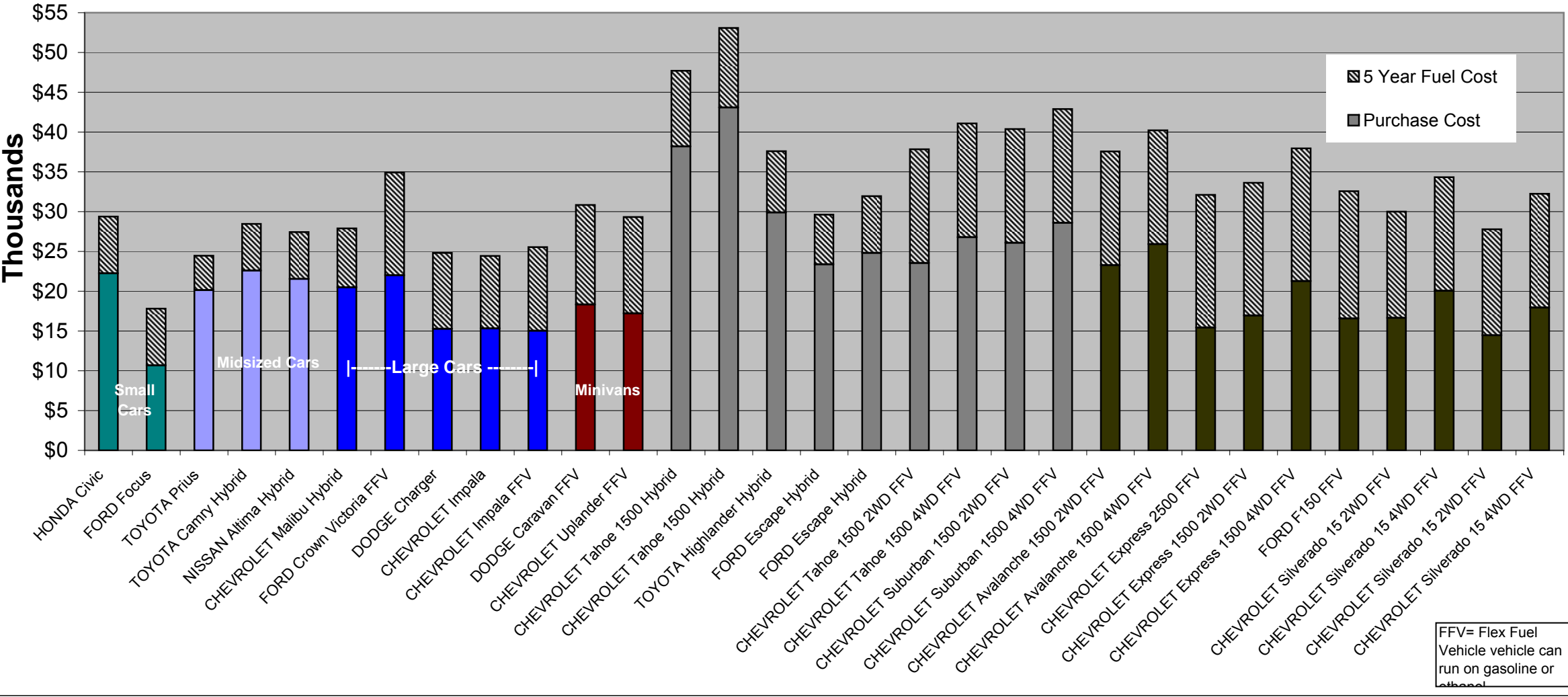
#### 2- Buy hybrid or highly fuel efficient vehicles when practicable

There are several vehicles on state contract which may be more costly to procure which actually cost less over a period of time due to increased fuel efficiency and decreased fuel costs. For example, if the County were to purchase an SUV, we would highly suggest the **Ford Escape Hybrid** be reviewed. In addition, for mid-sized cars we suggest the **Toyota Prius**. Both vehicles are cost effective, fuel efficient and produce low levels of emissions.

#### 3- Buy Flex-Fuel vehicles when available

Although the practicality and environmental benefit of ethanol fuels are highly debatable at this point in time, there are quite a few vehicles on the state contract list which are available in models which can run on gasoline or ethanol for no increase in purchase cost. When this is the case, we suggest buying the flex-fuel vehicle for the following reason 1) ethanol may become more widely available as a fuel source 2) alternative methods of ethanol production which have environmental benefits may be developed in the coming years. Purchase of flex fuel vehicles now would be a low to no cost way to position the County to take advantage of the economic and environmental advantages of alternative fuels in the future.

# Cost Comparison of Selected Vehicles Available on 2008 State Contract



## Model Year 2008 Green Vehicle Guide

Model	Veh Class	Cyl	Drive	Fuel	Air Pollution Score	City MPG	Hwy MPG	Cmb MPG	Greenhouse Gas Score	EPA SmartWay rated	NYS contract	2008 NYS Contract Price	5 yrs fuel at \$4/gal and 10K mpy	Purchase Cost + 5 yrs fuel
HONDA Civic	small car	(4 cyl)	2WD	CNG	9	24	36	28		yes	YES	\$22,246	\$7,143	\$29,389
<b>FORD Focus</b>		(4 cyl)	2WD	Gasoline	9.5	24	33	28	8	yes	YES	\$10,673	\$7,143	<b>\$17,815</b>
<b>TOYOTA Prius</b>	midsize car	(4 cyl)	2WD	Gasoline	8	48	45	46	10	yes	YES	\$20,122	\$4,348	<b>\$24,470</b>
TOYOTA Camry Hybrid		(4 cyl)	2WD	Gasoline	8	33	34	34	9	yes	YES	\$22,590	\$5,882	\$28,472
NISSAN Altima Hybrid		(4 cyl)	2WD	Gasoline	9.5	35	33	34	9	yes	YES	\$21,554	\$5,882	\$27,436
CHEVROLET Malibu Hybrid		(4 cyl)	2WD	Gasoline	6	24	32	27	8	yes	YES	\$20,478	\$7,407	\$27,886
FORD Crown Victoria FFV	large car	(8 cyl)	2WD	ethanol/gas	6/6	11/15	16/23	13/18	6/5	no	YES	\$22,009	\$12,903	\$34,912
DODGE Charger		(6 cyl)	2WD	Gasoline	6	18	26	21	6	no	YES	\$15,274	\$9,524	\$24,798
CHEVROLET Impala		(6 cyl)	2WD	Gasoline	6	18	29	22	6	no	YES	\$15,332	\$9,091	\$24,423
<b>CHEVROLET Impala</b>		(6 cyl)	2WD	ethanol/gas	6/6	14/18	21/29	16/22	8/6	yes	YES	\$15,016	\$10,526	<b>\$25,542</b>
DODGE Caravan	minivan	(6 cyl)	2WD	ethanol/gas	6/6	11/17	17/24	13/19	6/5	no	YES	\$18,334	\$12,500	\$30,834
CHEVROLET Uplander		(6 cyl)	2WD	ethanol/gas	6/6	12/16	17/23	14/19	7/5	yes	YES	\$17,204	\$12,121	\$29,326
CHEVROLET Tahoe 1500 Hybrid		(8 cyl)	2WD	Gasoline	6	21	22	21	6	no	YES	\$38,186	\$9,524	\$47,710
CHEVROLET Tahoe 1500 Hybrid	SUV	(8 cyl)	4WD	Gasoline	6	20	20	20	6	no	YES	\$43,069	\$10,000	\$53,069
TOYOTA Highlander Hybrid		(6 cyl)	4WD	Gasoline	8	27	25	26	8	yes	YES	\$29,899	\$7,692	\$37,591
<b>FORD Escape Hybrid</b>		(4 cyl)	2WD	Gasoline	8	34	30	32	9	yes	YES	\$23,376	\$6,250	<b>\$29,626</b>
<b>FORD Escape Hybrid</b>		(4 cyl)	4WD	Gasoline	8	29	27	28	8	yes	YES	\$24,804	\$7,143	<b>\$31,947</b>
CHEVROLET Tahoe 1500		(8 cyl)	2WD	ethanol/gas	7/7	11/14	15/20	12/16	6/4	yes	YES	\$23,546	\$14,286	\$37,832
CHEVROLET Tahoe 1500		(8 cyl)	4WD	ethanol/gas	7/7	11/14	14/19	12/16	6/4	yes	YES	\$26,794	\$14,286	\$41,080

## Model Year 2008 Green Vehicle Guide

Model	Veh Class	Cyl	Drive	Fuel	Air Pollution Score	City MPG	Hwy MPG	Cmb MPG	Greenhouse Gas Score	EPA SmartWay rated	NYS contract	2008 NYS Contract Price	5 yrs fuel at \$4/gal and 10K mpy	Purchase Cost + 5 yrs fuel
CHEVROLET Suburban 1500	SUV	(8 cyl)	2WD	ethanol/gas	7/7	11/14	15/20	12/16	6/4	yes	YES	\$26,085	\$14,286	\$40,371
CHEVROLET Suburban 1500		(8 cyl)	4WD	ethanol/gas	7/7	11/14	14/19	12/16	6/4	yes	YES	\$28,595	\$14,286	\$42,881
CHEVROLET Avalanche 1500		(8 cyl)	2WD	ethanol/gas	7/7	11/14	15/20	12/16	6/4	yes	YES	\$23,275	\$14,286	\$37,561
CHEVROLET Avalanche 1500		(8 cyl)	4WD	ethanol/gas	7/7	11/14	14/19	12/16	6/4	yes	YES	\$25,925	\$14,286	\$40,211
CHEVROLET Express 2500	van	(8 cyl)	2WD	ethanol/gas	6/6	9/12	12/16	10/14	4/2	no	YES	\$15,439	\$16,667	\$32,106
CHEVROLET Express 1500		(8 cyl)	2WD	ethanol/gas	6/6	9/12	12/16	10/14	4/2	no	YES	\$16,954	\$16,667	\$33,621
CHEVROLET Express 1500		(8 cyl)	4WD	ethanol/gas	6/6	9/12	12/16	10/14	4/2	no	YES	\$21,279	\$16,667	\$37,946
FORD F150 FFV	pickup	(8 cyl)	4WD	ethanol/gas	3/3	9/13	12/17	10/15	4/3	no	YES	\$16,305	\$16,000	\$32,305
FORD F150 FFV		(8 cyl)	4WD	ethanol/gas	6/6	9/13	12/17	10/15	4/3	no	YES	\$16,571	\$16,000	\$32,571
CHEVROLET Silverado 15		(8 cyl)	2WD	ethanol/gas	6/6	11/15	15/20	13/17	6/4	no	YES	\$16,654	\$13,333	\$29,988
CHEVROLET Silverado 15		(8 cyl)	4WD	ethanol/gas	6/6	11/14	14/19	12/16	6/4	no	YES	\$20,041	\$14,286	\$34,327
<b>CHEVROLET Silverado 15</b>		(8 cyl)	2WD	ethanol/gas	7/7	11/15	15/20	13/17	6/4	yes	YES	\$14,458	\$13,333	<b>\$27,791</b>
<b>CHEVROLET Silverado 15</b>		(8 cyl)	4WD	ethanol/gas	7/7	11/14	14/19	12/16	6/4	yes	YES	\$17,958	\$14,286	<b>\$32,244</b>
Note- Vehicles in blue font are considered preferred environmental choices. Please see the EPA green vehicle guide <a href="http://www.epa.gov/greenvehicle/">http://www.epa.gov/greenvehicle/</a> for additional information on the EPA rating criterion and SmartWay designation														